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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,178	09/12/2003	David Stoller	5281-1	2177
23486	7590	07/21/2005	EXAMINER	
SHUTTLEWORTH & INGERSOLL, P.L.C. 115 3RD STREET SE, SUITE 500 P.O. BOX 2107 CEDAR RAPIDS, IA 52406			EWALD, MARIA VERONICA	
			ART UNIT	PAPER NUMBER
			1722	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/605,178	<b>Applicant(s)</b> STOLLER ET AL.	
	<b>Examiner</b> Maria Veronica D. Ewald	<b>Art Unit</b> 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/12/03</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Osweiler (U.S. 3,201,843). Osweiler teaches a vibration system for machines making concrete products, which utilize a mold that includes an outer mold and an inner mold that provide an annular space into which concrete is introduced to form the concrete product (items 35, 36 – figure 2; column 2, line 70 – 71; column 3, lines 1 – 2). The apparatus is further comprised of an inner mold having an inner surface that defines an interior space having a longitudinal axis (item 35 – figure 2; column 3, lines 26 – 27), upper and lower bearing mounting plates spaced apart along the longitudinal axis of the interior space and secured to the inner mold (column 2, lines 40 – 41; column 3, lines 59 – 60; column 4, lines 15 - 16), a coupling shaft bearing mounted on each of the bearing mounting plates, a coupling shaft supported by and turnable in the coupling shaft bearings and having upper and lower ends extending beyond the upper and lower mounting plates (item 45 – figure 1; column 3, lines 42 – 44), a coupling hub fixed to each of the upper and lower ends of the coupling shaft (column 3, lines 41 – 42), upper and lower vibrator mounting plates secured to the inner mold beyond the upper and

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lower ends, of the coupling shaft (column 4, lines 5 – 6), an upper vibrator assembly mounted on the upper vibrator mounting plate and a lower vibrator assembly mounted on the lower vibrator mounting plate (column 3, lines 32 – 34), and upper and lower vibrator coupling hubs engageable with the respective coupling hubs at the upper and lower ends of the coupling shaft whereby the vibrator assembly can be properly synchronized (column 3, lines 41 – 42, 50 – 53). Furthermore, Osweiler teaches that there are weights eccentrically mounted to the upper and lower vibrator assemblies (items 49, 50 – figure 1; column 3, lines 46 – 49).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Osweiler in view of Tuerck (U.S. 1,810,583). Osweiler teaches the characteristics previously described but does not teach that the hubs are jaw-type hubs.

In a method to form concrete pipe, Tuerck teaches a mold with an outer section and a core (column 2, lines 72 – 73; column 3, lines 3 – 4). The apparatus further includes hubs slidably mounted upon the shaft with evenly spaced lugs in extending in radial direction (column 3, lines 15 – 20). The hubs configured with the lugs or projections are used such that they are rigidly secured to the inner surface of the core-

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sheet (column 3, lines 20 – 21). This reads on the Applicant's claim that the coupling hubs and the vibrator coupling hubs are each of the jaw type having jaws that are engageable so as to couple the upper and lower vibrator assemblies.

It would have been obvious at the time of the Applicant's invention to one of ordinary skill in the art to modify the molding apparatus of Osweiler with the jaw-type hubs of Tuerck for the purpose of ensuring that the hubs can be rigidly secured as taught by Tuerck.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Osweiler in view of Tuerck, and further in view of Schmidgall, et al. (U.S. 4,708,621). Osweiler and Tuerck teach the characteristics previously described but do not teach that there is a motor mounted on both the upper and lower vibrator assemblies.

In a method to form concrete pipe, Schmidgall, et al. teach the use of a two-form mold (column 3, lines 56 – 57). The two-form mold includes an outer mold or jacket (item 52 – figure 3) and an inner mold core (item 42 – figure 3). The core is supported on each end with an internal support plate (column 5, lines 9 – 10) to which a vibrator is attached (column 5, lines 10 – 11). The upper and lower vibrators are synchronized so that they will cause the upper end of the core to vibrate in a circular path opposite to the direction at the lower end of the core (column 5, lines 16 – 19). Having vibrator apparatus at each end with separate motor assemblies allows for variation in both amplitude and direction of the core vibration, such that concrete is packed faster and

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uniformly distributed (column 5, lines 28 – 30). In addition, this type of vibration system can eliminate hot spots or voids in the wall of the finished pipe (column 5, lines 32 – 33).

It would have been obvious at the time of the Applicant's invention to one of ordinary skill in the art to modify the molding apparatus of Osweiler with the hubs of Tuerck to further incorporate the dual motor assembly of Schmidgall, et al. for the purpose of varying the vibrational direction and amplitude of the core such that the concrete is packed more uniformly and quicker and to ensure that hot spots or voids are eliminated from the finished product as taught by Schmidgall, et al.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Osweiler in view of Tuerck, further in view of Schmidgall, et al. and further in view of Berry (U.S. 4,109,097). Osweiler, Tuerck, and Schmidgall, et al. teach the characteristics previously described but do not teach that the coupling means joining the hubs is elastic.

In improved expansion-deflection coupling means, Berry teaches the use of an elastic coupling means to join a first and second hub, respectively (column 3, lines 65 – 66). The elastic coupling means is made of a rigid tubular raceway of plastic material and is secured to the ends of each hub (column 3, lines 41 – 43). On the outer surface of the hubs, there is a flexible resilient sleeve of neoprene (column 3, lines 20 – 21). This type of expansion coupling means is suitable for connecting conduits which might be subject to linear or angular misalignment or which might be susceptible to expansion/contraction (column 1, lines 9 – 11). In addition, this type of coupling can be embedded in conduit that is inserted or embedded within large concrete pours or

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blocks, which may be subject to movement relative to each other (column 1, lines 13 – 15). The use of the elastic coupling means prevents damage to the conduit within the concrete block (column 1, lines 18 – 19).

It would have been obvious at the time of the Applicant's invention to one of ordinary skill in the art to modify the molding apparatus of Osweiler with the hubs of Tuerck and the dual motors of Schmidgall, et al. to further incorporate the elastic coupling means of Berry for the purpose of strengthening the inner mold or conduit which may be subject to movement, linear or angular misalignment, caused by the core vibration, which could potentially damage the conduit, as taught by Berry.

### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Veronica D. Ewald whose telephone number is 571-272-8519. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MVE

Joseph S. Del Sole  
7/19/05  
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